

***Listing of the Claims***

This listing of claims will replace all prior versions, and listings of claims in the application.

1 - 64. (Canceled)

65. (Currently Amended) A nucleic acid ladder comprising a plurality of nucleic acid fragments that exhibit substantially equal intensity after said ladder is separated by gel electrophoresis and stained with a detectable label, wherein said plurality comprises at least two fragments having a size ~~greater than~~ of between 1 kb and 25 kb, and wherein said plurality comprises at least two fragments having a size less than 1 kb.

66. (Currently Amended) The nucleic acid ladder of claim 65, wherein said plurality ranges in size from ~~about~~ 4kb to ~~about~~ 500bp.

67. (Currently Amended) The nucleic acid ladder of claim 65, wherein said plurality ranges in size from ~~about~~ 5kb to ~~about~~ 400bp.

68. (Currently Amended) The nucleic acid ladder of claim 65, wherein said plurality ranges in size from ~~about~~ 5kb to ~~about~~ 300bp.

69. (Currently Amended) The nucleic acid ladder of claim 65, wherein said plurality ranges in size from ~~about~~ 5kb to ~~about~~ 200bp.

70. (Currently Amended) The nucleic acid ladder of claim 65, wherein said plurality ranges in size from ~~about~~ 5kb to ~~about~~ 100bp.

71. (Currently Amended) The nucleic acid ladder of claim 65, wherein said plurality ranges in size from ~~about~~ 10kb to ~~about~~ 400bp.

72. (Currently Amended) The nucleic acid ladder of claim 65, wherein said plurality ranges in size from ~~about~~ 8kb to ~~about~~ 400bp.

73. (Currently Amended) The nucleic acid ladder of claim 65, wherein said plurality ranges in size from ~~about~~ 6kb to ~~about~~ 400bp.

74. (Previously Presented) The nucleic acid ladder of claim 65, wherein said plurality comprises at least 3 fragments having a size greater than 1 kb, and wherein said plurality comprises at least 3 fragments having a size less than 1 kb.

75. (Previously Presented) The nucleic acid ladder of claim 65, wherein said plurality comprises at least 3 fragments having a size greater than 1 kb, and wherein said plurality comprises at least 4 fragments having a size less than 1 kb.

76. (Previously Presented) The nucleic acid ladder of claim 65, wherein said plurality comprises at least 3 fragments having a size greater than 1 kb, and wherein said plurality comprises at least 5 fragments having a size less than 1 kb.

77. (Previously Presented) The nucleic acid ladder of claim 65, wherein said plurality comprises at least 4 fragments having a size greater than 1 kb, and wherein said plurality comprises at least 3 fragments having a size less than 1 kb.

78. (Previously Presented) The nucleic acid ladder of claim 65, wherein said plurality comprises at least 5 fragments having a greater size than 1 kb, and wherein said plurality comprises at least 3 fragments having a size less than 1 kb.

79. (Previously Presented) The nucleic acid ladder of claim 65, wherein said plurality comprises at least 4 fragments having a size greater than 1 kb, and wherein said plurality comprises at least 4 fragments having a size less than 1 kb.

80. (Previously Presented) The nucleic acid ladder of claim 65, wherein said plurality comprises at least 5 fragments having a size greater than 1 kb, and wherein said plurality comprises at least 5 fragments having a size less than 1 kb.

81. (Previously Presented) The nucleic acid ladder of claim 65, wherein said detectable label is ethidium bromide.

82. (Previously Presented) The nucleic acid ladder of claim 65, wherein said detectable label is SYBR green.

83. (Previously Presented) The nucleic acid ladder of claim 65, further comprising a dye.

84. (Previously Presented) The nucleic acid ladder of claim 83, wherein said dye is selected from the group consisting of bromophenol blue, xylene green, and mixtures thereof.

85. (Previously Presented) A nucleic acid ladder comprising a plurality of nucleic acid fragments having substantially equal relative mass, wherein said plurality comprises at least two fragments having a size greater than 1 kb, and wherein said plurality comprises at least two fragments having a size less than 1 kb.

86. (Currently Amended) The nucleic acid ladder of claim 85, wherein said plurality ranges in size from ~~about~~ 4kb to ~~about~~ 500bp.

87. (Currently Amended) The nucleic acid ladder of claim 85, wherein said plurality ranges in size from ~~about~~ 5kb to ~~about~~ 400bp.

88. (Currently Amended) The nucleic acid ladder of claim 85, wherein said plurality ranges in size from ~~about~~ 5kb to ~~about~~ 300bp.

89. (Currently Amended) The nucleic acid ladder of claim 85, wherein said plurality ranges in size from ~~about~~ 5kb to ~~about~~ 200bp.

90. (Currently Amended) The nucleic acid ladder of claim 85, wherein said plurality ranges in size from ~~about~~ 5kb to ~~about~~ 100bp.

91. (Currently Amended) The nucleic acid ladder of claim 85, wherein said plurality ranges in size from ~~about~~ 10kb to ~~about~~ 400bp.

92. (Currently Amended) The nucleic acid ladder of claim 85, wherein said plurality ranges in size from ~~about~~ 8kb to ~~about~~ 400bp.

93. (Currently Amended) The nucleic acid ladder of claim 85, wherein said plurality ranges in size from ~~about~~ 6kb to ~~about~~ 400bp.

94. (Previously Presented) The nucleic acid ladder of claim 85, wherein said plurality comprises at least 3 fragments having a size greater than 1 kb, and wherein said plurality comprises at least 3 fragments having a size less than 1 kb.

95. (Previously Presented) The nucleic acid ladder of claim 85, wherein said plurality comprises at least 3 fragments having a size greater than 1 kb, and wherein said plurality comprises at least 4 fragments having a size less than 1 kb.

96. (Previously Presented) The nucleic acid ladder of claim 85, wherein said plurality comprises at least 3 fragments having a size greater than 1 kb, and wherein said plurality comprises at least 5 fragments having a size less than 1 kb.

97. (Previously Presented) The nucleic acid ladder of claim 85, wherein said plurality comprises at least 4 fragments having a size greater than 1 kb, and wherein said plurality comprises at least 3 fragments having a size less than 1 kb.

98. (Previously Presented) The nucleic acid ladder of claim 85, wherein said plurality comprises at least 5 fragments having a size greater than 1 kb, and wherein said plurality comprises at least 3 fragments having a size less than 1 kb.

99. (Previously Presented) The nucleic acid ladder of claim 85, wherein said plurality comprises at least 4 fragments having a size greater than 1 kb, and wherein said plurality comprises at least 4 fragments having a size less than 1 kb.

100. (Previously Presented) The nucleic acid ladder of claim 85, wherein said plurality comprises at least 5 fragments having a size greater than 1 kb, and wherein said plurality comprises at least 5 fragments having a size less than 1 kb.

101. (Previously Presented) The nucleic acid ladder of claim 85, wherein said detectable label is ethidium bromide.

102. (Previously Presented) The nucleic acid ladder of claim 85, wherein said detectable label is SYBR green.

103. (Previously Presented) The nucleic acid ladder of claim 85, further comprising a dye.

104. (Previously Presented) The nucleic acid ladder of claim 103, wherein said dye is selected from the group consisting of bromophenol blue, xylene green, and mixtures thereof.

105. (Previously Presented) A nucleic acid ladder comprising a plurality of nucleic acid fragments, wherein the copy number of said fragments is such that the mass of said fragments is substantially equivalent, wherein said plurality comprises at least two fragments having a size greater than 1 kb, and wherein said plurality comprises at least two fragments having a size less than 1 kb.

106. (Currently Amended) The nucleic acid ladder of claim 105, wherein said plurality ranges in size from ~~about~~ 4kb to ~~about~~ 500bp.

107. (Currently Amended) The nucleic acid ladder of claim 105, wherein said plurality ranges in size from ~~about~~ 5kb to ~~about~~ 400bp.

108. (Currently Amended) The nucleic acid ladder of claim 105, wherein said plurality ranges in size from ~~about~~ 5kb to ~~about~~ 300bp.

109. (Currently Amended) The nucleic acid ladder of claim 105, wherein said plurality ranges in size from ~~about~~ 5kb to ~~about~~ 200bp.

110. (Currently Amended) The nucleic acid ladder of claim 105, wherein said plurality ranges in size from ~~about~~ 5kb to ~~about~~ 100bp.

111. (Currently Amended) The nucleic acid ladder of claim 105, wherein said plurality ranges in size from ~~about~~ 10kb to ~~about~~ 400bp.

112. (Currently Amended) The nucleic acid ladder of claim 105, wherein said plurality ranges in size from ~~about~~ 8kb to ~~about~~ 400bp.

113. (Currently Amended) The nucleic acid ladder of claim 105, wherein said plurality ranges in size from ~~about~~ 6kb to ~~about~~ 400bp.

114. (Previously Presented) The nucleic acid ladder of claim 105, wherein said plurality comprises at least 3 fragments having a size greater than 1 kb, and wherein said plurality comprises at least 3 fragments having a size less than 1 kb.

115. (Previously Presented) The nucleic acid ladder of claim 105, wherein said plurality comprises at least 3 fragments having a size greater than 1 kb, and wherein said plurality comprises at least 4 fragments having a size less than 1 kb.

116. (Previously Presented) The nucleic acid ladder of claim 105, wherein said plurality comprises at least 3 fragments having a size greater than 1 kb, and wherein said plurality comprises at least 5 fragments having a size less than 1 kb.

117. (Previously Presented) The nucleic acid ladder of claim 105, wherein said plurality comprises at least 4 fragments having a size greater than 1 kb, and wherein said plurality comprises at least 3 fragments having a size less than 1 kb.

118. (Previously Presented) The nucleic acid ladder of claim 105, wherein said plurality comprises at least 5 fragments having a size greater than 1 kb, and wherein said plurality comprises at least 3 fragments having a size less than 1 kb.

119. (Previously Presented) The nucleic acid ladder of claim 105, wherein said plurality comprises at least 4 fragments having a size greater than 1 kb, and wherein said plurality comprises at least 4 fragments having a size less than 1 kb.

120. (Previously Presented) The nucleic acid ladder of claim 105, wherein said plurality comprises at least 5 fragments having a size greater than 1 kb, and wherein said plurality comprises at least 5 fragments having a size less than 1 kb.

121. (Previously Presented) The nucleic acid ladder of claim 105, wherein said detectable label is ethidium bromide.

122. (Previously Presented) The nucleic acid ladder of claim 105, wherein said detectable label is SYBR green.

123. (Previously Presented) The nucleic acid ladder of claim 105, further comprising a dye.

124. (Previously Presented) The nucleic acid ladder of claim 123, wherein said dye is selected from the group consisting of bromophenol blue, xylene green, and mixtures thereof.

125. (Previously Presented) The nucleic acid ladder of claim 85, wherein the relative mass of each fragment of said plurality is no more than 3 times the relative mass of any other fragment of said plurality.

126. (Previously Presented) The nucleic acid ladder of claim 85, wherein the relative mass of each fragment of said plurality is no more than 2.5 times the relative mass of any other fragment of said plurality.

127. (Previously Presented) The nucleic acid ladder of claim 85, wherein the relative mass of each fragment of said plurality is no more than 2 times the relative mass of any other fragment of said plurality.

128. (Canceled)

129. (Previously Presented) The nucleic acid ladder of claim 85, wherein the relative mass of each fragment of said plurality is about the same.

130. (Previously Presented) The nucleic acid ladder of claim 65, wherein each fragment of said plurality exhibits an intensity no more than 3 times the intensity of any other fragment of said plurality.

131. (Previously Presented) The nucleic acid ladder of claim 65, wherein each fragment of said plurality exhibits an intensity no more than 2.5 times the intensity of any other fragment of said plurality.



132. (Previously Presented) The nucleic acid ladder of claim 65, wherein each fragment of said plurality exhibits an intensity no more than 2 times the intensity of any other fragment of said plurality.

133. (Previously Presented) The nucleic acid ladder of claim 65, wherein each fragment of said plurality exhibits an intensity no more than 1.5 times the intensity of any other fragment of said plurality.

134. (Previously Presented) The nucleic acid ladder of claim 65, wherein each fragment of said plurality exhibits about the same intensity.

135. (Previously Presented) The nucleic acid ladder of claim 105, wherein the copy number of each fragment of said plurality is such that the mass of each fragment is no more than 3 times the mass of any other fragment of said plurality.

136. (Previously Presented) The nucleic acid ladder of claim 105, wherein the copy number of each fragment of said plurality is such that the mass of each fragment is no more than 2.5 times the mass of any other fragment of said plurality.

137. (Previously Presented) The nucleic acid ladder of claim 105, wherein the copy number of each fragment of said plurality is such that the mass of each fragment is no more than 2 times the mass of any other fragment of said plurality.

138. (Previously Presented) The nucleic acid ladder of claim 105, wherein the copy number of each fragment of said plurality is such that the mass of each fragment is no more than 1.5 times the mass of any other fragment of said plurality.

139. (Previously Presented) The nucleic acid ladder of claim 105, wherein the copy number of each fragment of said plurality is such that the mass of each fragment of said plurality is about the same.